Digital Services

As the National Digital Forecast Database (NDFD) becomes operational this year, it will revolutionize the way the NWS produces and distributes forecasts. The NDFD will generate opportunities for our partners and customers to provide new products and services for the public and will impact all of our service areas.

Vision

To provide access to high quality, high temporal and spatial resolution digital climate, water, and weather data to customers and partners.

Concept of Operations

The NWS will make available a number of forecast grids of sensible weather elements in the NDFD. In addition, national graphics and images from 16 predefined geographic sectors will be made available to the public. The NDFD is a seamless mosaic of digital forecasts from our field offices working in collaboration with National Centers for Environmental Prediction (NCEP).

The NDFD will be made available to all NWS customers and partners in formats including grids and graphics with tools provided for further conversion to shape files for GIS.

A large part of the FY 04 plan for Digital Services is to gather and integrate feedback from our customers and partners. Our products will be modified and improved based on this feedback. For more information visit **http://www.nws.noaa.gov/ndfd**.

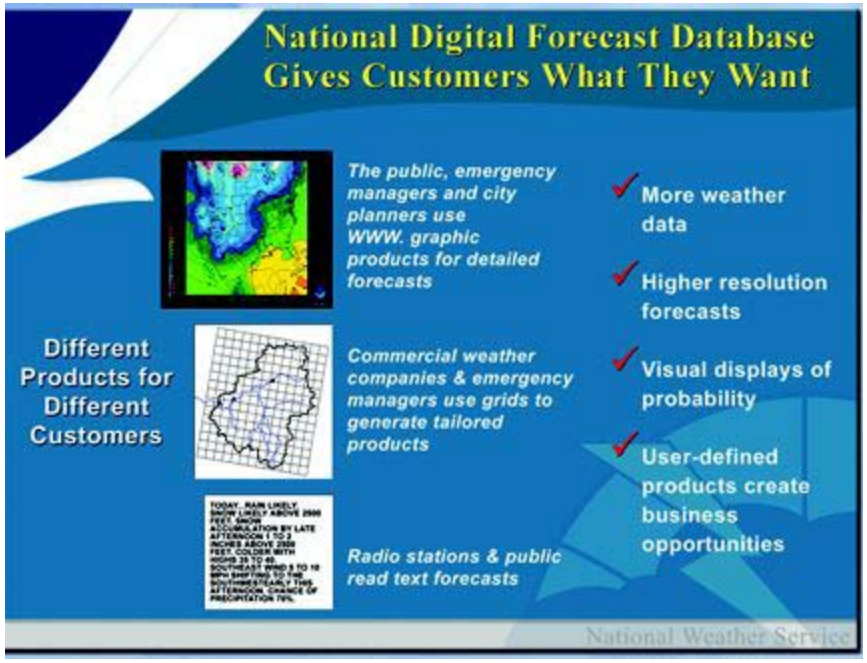
Customer and Partner Requirements

The customers and partners of NWS Digital Services require highly accurate, continually updated forecast information. Users of this new type of information require consistent forecasts across local forecast office boundaries. Unmet needs include forecast uncertainty using probabilistic techniques and the expansion of digital information to include observations and historic data. Partners would like digital services made available in a variety of formats.

Link to Science and Technology Infusion Plan

Long range goals will be met by following a technology path which supports the full integration of all forecast and warning functions into the NDFD environment. These include:

- ✓ Probabilistic products
- ✓ Observations
- ✓ Point data
- ✓ Historic data
- ✓ Increased resolution
- ✓ Additional data formats



Overview of NDFD capabilities

Science and Technology Requirements

A chat room tool is used to support collaboration among offices responsible for creating grids. Tools in the software allow offices to view preliminary forecast grids from neighboring offices. Other grid editing tools, many developed at the local offices, are used in the creation of grids to infuse science into the forecast process.

Product and Service Changes

Most traditional, text-based NWS forecast products will be generated from the grids produced by local NWS offices. In addition, new Area and Point Forecast Matrices will be produced. The initial set of experimental grids will include the following forecast and derived elements:

- ✓ Maximum/minimum temperature
- ✓ Surface temperature
- ✓ Dewpoint
- ✓ 12-hour probability of precipitation
- ✓ Sky cover
- ✓ Wind direction and speed
- ✓ Quantitative precipitation forecast
- ✓ Snow accumulation
- ✓ Significant wave height
- ✓ Weather

Milestones by Quarter

1st Quarter

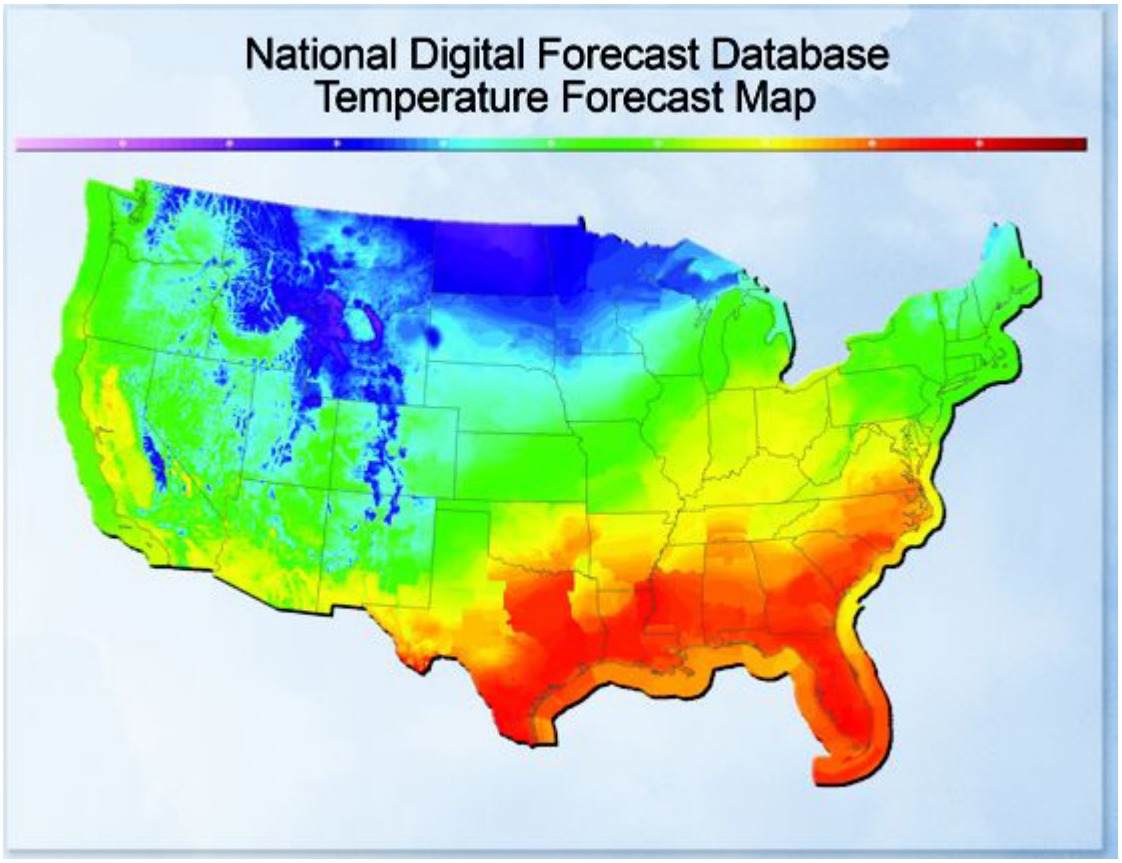
- Use Interactive Forecast Preparation Systems (IFPS) to generate point forecast matrices. (Milestone met, 1st quarter)
- Use IFPS to generate text products. (Milestone met, 1st quarter)
- Evaluate partner and customer feedback. (Milestone met, 1st quarter)

2nd Quarter

- Evaluate partner and customer feedback. (Milestone met, 2nd quarter)

3rd and 4th Quarters

- Decide which National Digital Forecast Database grid elements will be declared official products. (Milestone met, 4th quarter)
- For more information on new products, go to **http://www.nws.noaa.gov/om/notifications/tin03-42ndfd_cca.txt**.



Visit the current posting of this interactive map at **http://www.weather.gov/forecasts/graphical**

Training

IFPS Methodology Workshops will continue to share of best practices. Teletraining sessions and web modules will continue to be used to improve forecasters' skills.

Outreach

An information toolbox for NDFD now exists for field offices. Content includes a calendar of events, briefing materials, resources, and feedback. Updated materials will be added in 2004. For more information, visit **http://onestop.noaa3.awips.noaa.gov/ndfdindex.html**.

Information on this new Digital Service Program will be shared with NWS partners and customers at the following venues:

- ✓ AMS meetings and conferences
- ✓ National Safety Council (NSC) Congress and Exposition
- ✓ IAEM and NEMA annual conferences
- ✓ NWS partners workshop

- ✓ National Hydrologic Warning Council (NHWC) meetings

Dissemination

Digital databases are available as grids on an FTP server, as graphical images on hosted web pages, and through a secure web service. For more information, please visit **http://www.nws. noaa.gov/ndfd/technical/technical.htm**.

Verification

- ✓ While a verification system for gridded information is being designed, the initial verification will consist of feedback from a point-based scheme.
- ✓ An automated daily forecast critique process will continue to be used in field offices.

PoP Grid for Northwest Sector

- ✓ In FY 04, the NWS will expand the point based verification beyond Model Output Statistics (MOS) guidance points, to also include surface observation points.

Regional Initiatives

Central

- ✓ Central Region implements "point-andclick" from grids capability on web sites replacing traditional zone forecast concept.
- ✓ Automate NWR audio updates directly from IFPS grids.

Southern

- ✓ Implement graphical web page for each WFO.
- ✓ Continue to provide presentations and customer workshops about the digital era and improved digital services.
- ✓ Make available network Common Data Form (netCDF) grid format.
- ✓ Create forecasts directly from the grids for posting on the Internet.

Contact Information

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